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Review of Health Systems of the Middle East and North Africa Region

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Introduction

Geopolitically, the Middle East and North Africa (MENA) region is strategically situated, with more than half of the countries of the region contributing to a significant proportion of the world's energy production. Despite this abundance of resources, there has been modest growth and poverty reduction in the region when compared to others. The region as a whole has, however, achieved significant progress in health outcomes in the past few decades as a result of improved health systems focused on strengthening health service delivery, public health programs, and application of new medical technologies. These achievements at a regional level mask significant disparities among and within countries; these disparities, along with ongoing demographic transitions and epidemiologic changes, pose significant equity and efficiency challenges for MENA health systems.

This article is an analysis of MENA health systems and a review of issues facing them. It highlights the challenges that countries need to address to ensure more efficient and responsive systems. The World Bank composition of the MENA region will be used primarily in this article; the countries include Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates (UAE), West Bank and Gaza (WBG), and Yemen. However, where reference is made to World Health Organization/Eastern Mediterranean Office (WHO/EMRO) classification of MENA in this article, it will also include data from Afghanistan, Pakistan, Somalia, and Sudan but exclude data from Algeria.

The article begins with a regional overview of the socioeconomic status and health systems achievement in past decades and then addresses current health patterns of the region. Before going on to address the health-related challenges facing the region, the article reviews the organization of both biomedical and traditional medical services by detailing issues of access, staffing, and other key health resources, financing, and governance structures.

Regional Overview

In the last couple of decades, despite modest growth, the MENA region has witnessed significant achievements in morbidity and mortality patterns and other measures of health status. These health achievements can largely be attributed to the expansion of health services and public health programs and to educational and socioeconomic developments. In comparison with other countries (in Latin America and East Asia) of similar per capita incomes, the World Bank (Iqbal, 2006) has demonstrated that the MENA region has performed favorably on human development indicators in general and more

specifically on health outcomes. While MENA countries had worse health indicators (using child mortality and life expectancy as proxies) in 1960 than comparable countries, the gap had been eliminated by 2000. The average infant mortality rate for the region has dropped from 137 per 1000 live births in 1970 to 21 per 1000 live births in 2012 (Table 1). The average life expectancy at birth for the region has increased to 71 years in 2012 from 65 years in 1990. However, these regional achievements hide disparities among and within countries of the region. For example, by World Bank estimates the infant mortality rate in 2012 ranged from 10 per 1000 live births in Kuwait to 46 in Yemen. In Egypt in 2008, infant mortality rates were 42 per 1000 live births among the poorest-income quintile households and 17 per 1000 live births among the highest-income quintile households in the country.

MENA countries are also diverse in economic terms, with per capita income (2013) ranging from US \$1330 in Yemen to US \$85 550 in Qatar. MENA countries can be divided into three main groups that differ in terms of their economic and health outcomes achievements: (1) low-income countries (Yemen and Djibouti), which have the highest infant mortality rates and maternal mortality ratios in the region and are facing the greatest health-related challenges; (2) middle-income countries (Algeria, Egypt, Iran, Iraq, Jordan, Lebanon, Libya, Morocco, Syria, Tunisia, and West Bank and Gaza), which have made significant progress in improving health outcomes although some of these countries continue to face rural/urban disparities in both health outcomes and gaps in health coverage; and (3) high-income countries of the Cooperation Council for the Arab States of the Gulf (CCASG) (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates), which have achieved good health outcomes as a benefit of oil revenues used to achieve universal access to health services.

Political conflicts across the region have had significant impacts on health outcomes achievements and health systems development for many countries (Sen et al., 2013). From 2010 up until 2014, political uprisings, protests, and armed conflicts have affected Tunisia, Egypt, Yemen, Bahrain, Syria, Algeria, Iraq, Jordan, Kuwait, Morocco, Sudan, and West Bank Gaza. Most of the initial protests of the Arab Spring ended as of 2012, while others like the large-scale conflict in Syria, and between Israel and Gaza, continue to this day.

Like many other global governments, MENA countries signed on to the Millennium Development Goals (MDGs) – a global effort to track key development achievements between 1990 and 2015. The region continues to face development challenges, including rapid population growth, high unemployment particularly among the youth, water scarcity, gender inequality, and socioeconomic disparities among the rich and poor that threaten achievement of the MDGs. However, most countries of the MENA region are largely on track to achieve

Table 1 Income and health indicators for MENA countries

Country/Region	GNI per capita (in US\$)		Infant mortality rate (deaths per 1000 live births)				Life expectancy (in years)		
	2004	2013	1970	1990	2004	2012	1990	2004	2012
Algeria	2270	5290	141	42	35	17	67	71	71
Bahrain	14 370	19560	67	20	9	8	73	75	77
Djibouti	960	–	–	93	101	66	57	53	61
Egypt Arab Republic	1250	3160	160	63	26	18	65	70	71
Iran	2320	5780	134	44	32	15	63	71	74
Iraq	–	6710	104	42	87.9 ^b	28	68	60	69
Jordan	2190	4950	–	30	23	16	70	72	74
Kuwait	24 040	44 940	54	14	10	10	72	77	74
Lebanon	6010	9870	50	27	27	8	70	72	80
Libya	4400	–	124	37	18	13	69	74	75
Morocco	1570	3030	130	63	38	27	65	70	71
Oman	9070	25 250	129	32	10	10	67	75	77
Qatar	–	85 550	71	18	18	6	75	74	78
Saudi Arabia	10 170	26 200	123	37	21	7	69	72	75
Syrian Arab Republic	1230	–	98	31	15	12	70	74	75
Tunisia	02650	4360	124	40	21	14	70	73	75
UAE	23 770	38 620	87	14	7	7	72	79	77
WBG ^c	01120	2810	–	35	19.2 ^e	19	68	73	73
Yemen, Republic	0550	1330	188	88	82	46	58	61	63
MENA (regional average)	1972	–	137	52	44	21	65	69	71

^aData for 1990.

^bMost recent data from Population Reference Bureau.

^cWBG, West Bank and Gaza.

^dData for 1990.

^eMost recent data from Population Reference Bureau.

Reproduced from World Bank estimates (1998); World Bank, 2006. World Development Indicators. The World Bank, Washington, DC, USA; and UNFPA and Population Reference Bureau, 2005. Country Profiles for Population and Reproductive Health: Policy Development and Indicators. Chapter 3: Arab States http://www.prb.org/pdf06/2005UNFPA_CountryProfiles.pdf (accessed September 2007).

the health-related goals including reducing maternal mortality, child mortality and HIV, TB, and malaria morbidity and mortality. As stated earlier, this aggregate regional picture is complicated by disparities in MDG achievement across countries and within countries plagued by significant income inequality.

Key Health Patterns/Issues

Epidemiological and Demographic Transitions and Their Effects on Morbidity and Mortality Patterns

Gaziano (2007) notes that the region as a whole is moving toward the third stage of epidemiological transition, characterized by degenerative and man-made diseases. Still, a number of countries face dual burdens of disease characterized by decreasing, but still prevalent, communicable diseases and increasing rates of noncommunicable diseases (NCDs). The WHO estimates that between 2010 and 2020 the burden of communicable diseases will decline from 29% to 20%, while the burden of NCDs will increase from 53% to 60%. (Changes in burden of disease and injuries in the MENA region from 2000 to 2020. Reproduced from Statistics from World Health Organization, 1996. The Global Burden of Disease and Injuries Series, vol. 1. Harvard School of Public Health, Cambridge, MA.)

Four main trends have driven changes in the leading causes of disability-adjusted life years (DALYs) globally: aging

populations, increases in NCDs, shifts toward disabling causes and away from fatal causes, and changes in risk factors. Figure 1 shows that, among NCDs, diabetes, anxiety, drug use disorders, low back and other musculoskeletal disorders increased the most in the Middle East and North Africa between 1990 and 2010, while lower respiratory infections, diarrhea, and preterm birth complications decreased between 1990 and 2010. (Institute for Health Metrics and Evaluation, Human Development Network, The World Bank, 2013. The Global Burden of Disease: Generating Evidence, Guiding Policy – Middle East and North Africa Regional Edition. Figure 7. IHME, Seattle, WA.)

For low-income countries and rural areas in middle-income countries like Egypt and Morocco, communicable diseases co-exist with an increasing burden of NCDs, dispelling previous notions that NCDs mostly affect the affluent. Middle- and upper-income countries in MENA, on the other hand, are mainly burdened by NCDs, having largely eliminated communicable diseases.

The effects of rapid urbanization (60% of MENA's population live in urban areas) and changes in diet and lifestyle are significant contributing factors to the rising rates of NCDs in the region. Of public health concern is the increasing prevalence of tobacco use in the region, where tobacco-related deaths were projected by Murray and Lopez (1996) to increase from 2.4% in 1990–9.5% in 2020. Global smoking prevalence data presented by Jha et al. (2002) reveal that the overall MENA prevalence was 23%, less than the global average of 29%. Data

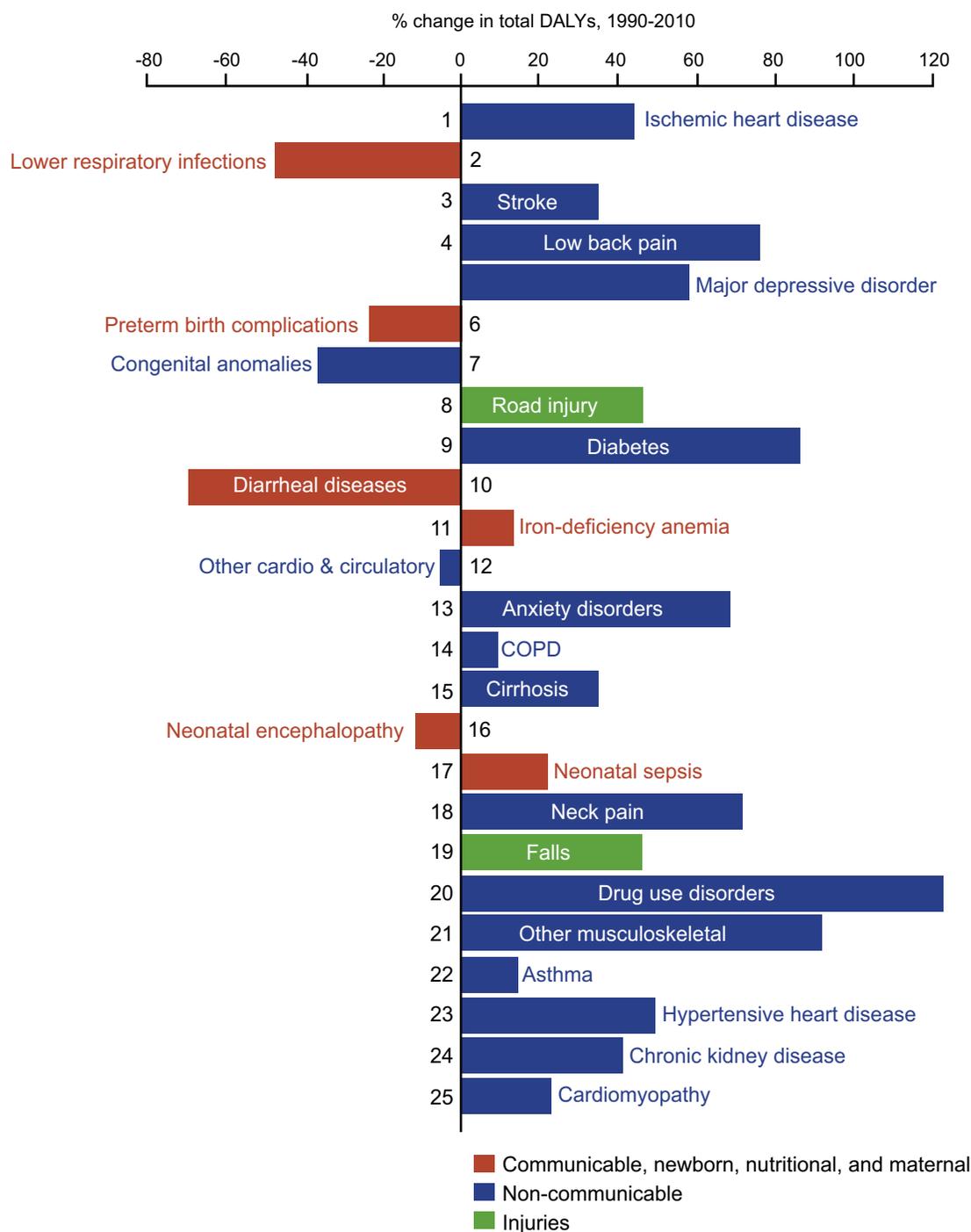


Figure 1 Shifts in leading causes of DALYs in the Middle East and North Africa, 1990–2010. Citation: Institute for Health Metrics and Evaluation, Human Development Network, The World Bank, 2013. The Global Burden of Disease: Generating Evidence, Guiding Policy – Middle East and North Africa Regional Edition. Figure 7. IHME, Seattle, WA.

from WHO/EMRO for subsequent years (1996–2000) indicate that the smoking prevalence rates in the MENA region are increasing (Table 2), with prevalence rates among men ranging from 15.5% in Oman to 77% in Yemen (Figure 2).

The region is also experiencing a nutrition transition characterized by a high prevalence of stunting from undernutrition, particularly in low-income countries and certain geographic

areas of middle-to high-income countries. There is also widespread iron-deficiency anemia and other micronutrient deficiencies, along with newer problems related to obesity from overnutrition and their links with NCDs/chronic conditions. The adoption of Western lifestyles, including decreased physical activity and significant increases in the consumption of energy-dense foods, has led to significant increases in the

Table 2 Tobacco consumption prevalence (%) of MENA countries by sex and age

Country	Adult male (%)	Adult female (%)	Young male (%)	Young female (%)	Youth age in years	Year of study
Algeria	32	<0.5	–	–	–	2000
Bahrain	23.5	5.7	4.6	0.3	15–19	1998
Djibouti	57.5	4.7	47.4	–	15–19	1995
Egypt	35.0	1.6	15.0	2.0	15–19	1998
Iran	27.2	3.4	10.1	0.7	15–19	1994
Jordan	48.0	10.0	25.0	14.5	13–15	1999
Kuwait	29.6	1.5	12.0	0.1	15–19	1996
Lebanon	46.0	35.0	33.7	–	15–19	1998
			(Both sexes)			
Morocco	34.5	1.6	–	–	–	2000
Oman	15.5	1.5	8.6	(Both sexes)	15–19	1995
Palestine	40.7	3.2	9.8	(Both sexes)	15–19	1997
Qatar	37.0	0.5	18.0	(Both sexes)	15–19	1999
Saudi Arabia	22.0	1.0	–	–	–	1996
Syria	50.6	9.9	16.0	0.8	15–19	1999
Tunisia	61.9	7.7	30.0	4.0	15–19	1997
United Arab Emirates	18.3	<1.0	18.6	–	15–19	1996
Yemen	77.0	29.0	–	–	–	1998

Reproduced from WHO/EMRO Tobacco Free Initiative. Eastern Mediterranean region country profile. <http://www.emro.who.int/tfi/CountryProfile-Part6.htm> (accessed September 2007) and World Bank, 2006. World Development Indicators. The World Bank, Washington, DC, USA for Algeria only.

prevalence of overweight and obese populations. MENA along with the Pacific Islands, Southeast Asia, and China face the greatest threat of increasing prevalence of overweight and obese children in the world.

The rising numbers of road traffic accidents (RTAs) is also becoming a major cause of premature mortality in the region and shows no signs of abating, with an increasing number of vehicles overcrowding limited infrastructure. According to WHO, there was a dramatic increase (20%) in the number of deaths due to RTAs from 1980 to 1995 and the trend has continued since then. *Kopits and Cropper (2003)* indicate that in 1990 there were about 41 000 road traffic fatalities in MENA and predict that this number will be 94 000 in 2020, a 68% increase. *Peden et al. (2004)* reported that at 26.4 road traffic deaths per 100 000 population, low- and middle-income countries of MENA have among the highest rates in the world (compared to a global rate of 19 per 100 000). More than 130 000 people are killed yearly due to road traffic injuries in the MENA region, with an estimated cost of more than 3% of the regional GNI. The MENA road network carries only 2% of the world's fleet, yet it contributes to 10% of the traffic fatalities. The Global Burden of Disease estimates that car crashes are the leading cause of death in MENA for the 5- to 14-year-old age group since 2002, and will become the leading cause of death for the total population by 2015.

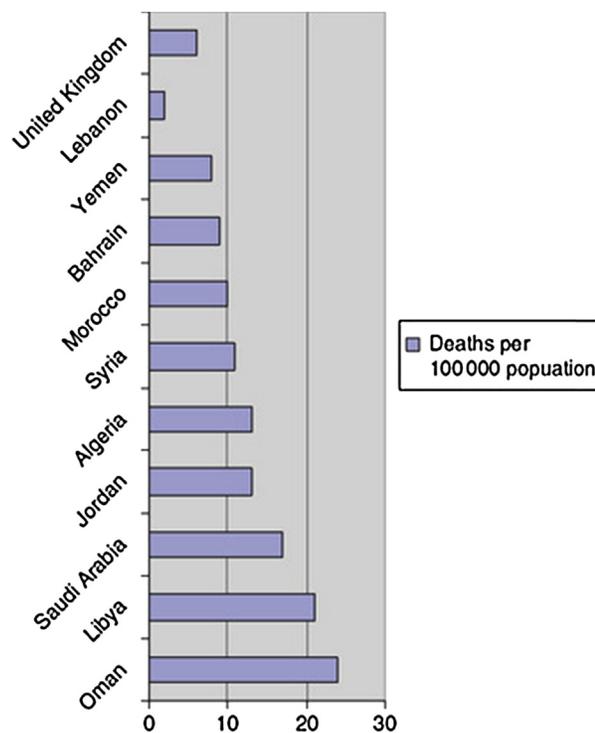


Figure 2 Fatality risk from road crashes in selected MENA countries and the United Kingdom. Reproduced from Jacobs, G.D., Aeron-Thomas, A., Astrop, A., 2000. Estimating Global Road Fatalities. Report TRL445. Transport Research Laboratory, Crowthorne, UK.

Figure 3 demonstrates road-crash-related death rates per 100 000 population of selected MENA countries, which are generally higher than the rate for the United Kingdom.

From 1950 to 2000, MENA experienced a 3.7-fold increase in population, the highest population growth rate in the world (**Figure 3**) and currently has the second highest annual population growth in the world (at 2% or nearly 7 million additional people per year). At this rate, MENA's population is projected to double in about 50 years (*Population Reference Bureau, 2001*). Much of this growth is among the young with

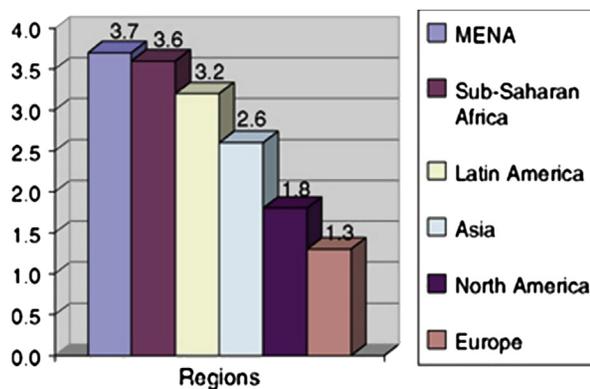


Figure 3 Ratio of population size in 2000 to population in 1950, by regions. Reproduced from United Nations, 2001. World Population Prospects: The 2000 Revision. United Nations, New York.

58% of the population less than 25 years old (UN, 2006). Countries of the region are however at different stages of the demographic transition, ranging from those in the early transition stage with both high birth and death rates, such as Yemen and Djibouti, right up to those considered to have essentially completed the transition with both low birth and death rates, such as Bahrain, Kuwait, Qatar, and United Arab Emirates.

Migration to, from, and within the region is also a significant contributor to the population dynamics in MENA – both migration for official employment purposes, as well as due to internal and regional displacement. The oil-exporting countries of the region have hosted millions of foreign workers since the oil boom of the 1970s, with foreign workers constituting anywhere from 60% to 90% of workers in these countries. Arabs from other MENA countries and Asians from Pakistan, India, the Philippines, and Indonesia make up the majority of the foreign workers in the oil-exporting countries, which also have to provide services to address health concerns of the workers and their families. In addition, the region has the largest refugee population in the world. According to UNHCR, the region experienced the largest growth in internally displaced people (IDP) in 2012, increasing 40% from 2011 with numbers expected to continue to rise in 2013. The surge in refugees and IDPs is likely due to political conflict. Countries with already burdened health systems face great difficulties in providing health services to these refugee and IDP populations.

Emerging Diseases

Like the rest of the world, newer diseases such as HIV/AIDS and highly pathogenic Middle East Respiratory Syndrome (MERS-CoV) are emerging in MENA and posing new challenges. According to the UNAIDS (2011), HIV has been on the rise in the region since 2001, though the overall prevalence remains low and largely limited to high-risk groups (who are also highly marginalized and difficult to reach). The MENA region does, however, face the second-highest growth rate of HIV infection in the world. Unless effective and timely preventive measures are implemented, the disease could have significant social and economic consequences. Akala and El-Saharty (2006) estimate that health-related expenditures on HIV/AIDS could reach, on average, 1.5% of the gross domestic product (GDP) of MENA countries by 2015. Economic losses would result from rising mortality and morbidity, which would reduce labor productivity, reduce capital investments, and shrink the labor force. HIV/AIDS surveillance systems to track the epidemic are particularly weak in the region. The lack of data, combined with high levels of stigma and discrimination against high-risk groups and HIV-infected persons, provides an optimal context for the disease to spread silently.

MERS-CoV, a strain of the coronavirus emerging in the Arabian Peninsula, has posed a challenging threat to health systems in the region since 2012. Cases have been found in Saudi Arabia, UAE, Qatar, Oman, Jordan, Kuwait, Yemen, Lebanon, and Iran and have spread to neighboring MENA countries, Western Europe, and as far as the United States (CDC, 2014). Frequent travel through the region for commercial, religious, and tourism purposes increases the reach of the disease and the possibility of pandemic infection. By 2014, nearly 30% of the roughly 300 diagnosed MERS-CoV cases have resulted in

fatality. The origin of the virus remains unknown, and human-to-human transmission through close contact is most frequently the source of infection.

Organization of Health Systems

Both biomedical and traditional medical systems exist in the region; while the former predominates, the latter also provides a significant but difficult-to-quantify quantity of services. The following subsections discuss the organization of both systems in MENA.

Organizational Structure of Biomedical Health Systems

MENA health systems were originally organized to provide primary health care (PHC) services as a means to achieve WHO-supported “Health for All” goals by the year 2000. More recently, the emphasis has shifted to a more curative focus with large investments in acute hospital care. The current curative and hospital-based approach is accompanied by the demographic and health care changes documented above with rising burden of chronic disease. This represents a potential allocative mismatch, with diversion of resources toward acute care while population changes require greater investment in primary care. WHO assesses that MENA will have to address a number of identified weak areas including limited intersectoral cooperation; poor community involvement in planning and provision; weak policy analysis, formulation, coordination, and regulation; weak health information systems; poor organization and management of health services at all levels; and inappropriate human resource policies.

The provision of health services in MENA had primarily been the role of the state, with centralized financing, regulatory, and delivery infrastructure. In recent years, many governments have begun to separate these functions in order to maximize efficiency and effectiveness of the health sector. Governments most often retain the regulatory and policy-making functions. However, MENA governments have in many instances shifted service delivery to independent management systems to operate the acute and primary health care delivery infrastructure. Financing for health is still in large part via centralized funds, though there are a number of national health insurance schemes with tiered coverage levels and diverse expected sources of funds are on the horizon in the region.

More recently, with many governments’ inability to fully respond to the population’s health service needs, the private medical sector has been expanding to fill gaps in coverage, with resulting concerns about equity, efficiency, and quality assurance due to inadequate regulation of this sector by the government. The private sector is now playing a dominant role in the health sector of many MENA countries (including growth in the Gulf countries). While historically these private providers focused on curative services and provision of hospital-oriented and capital-intensive services, there has been recent growth of private primary and specialty care services in countries like the United Arab Emirates among others.

By the income groupings already described, low-income countries have developed two-tiered health systems

characterized by government and privately provided services. Although government services are subsidized and should be available to all citizens, in reality the quality is often suboptimal, with inexperienced staff and poor availability of medical supplies and drugs. In addition, public services on the one hand do not fully cover rural and remote areas of these countries, particularly in Yemen where there are significant physical barriers to rural populations accessing these services. Access to privately provided services, on the other hand, requires households to make direct out-of-pocket payments that can be impoverishing for the poor. As an example, in 2010, 98.6% of private health expenditures were out-of-pocket and public health expenditure accounted for only 21% of total health expenditures in Yemen (Table 3).

In middle-income countries of the region, governments have implemented reforms focusing on the financing and organizational aspects of health systems. Social health insurance systems have been implemented to varying degrees among these countries, with many facing issues of population and service coverage particularly for workers in the informal sectors. The gaps in coverage have created the need for various providers, including the private (for-profit and nonprofit) sector and the voluntary sector, leading to fragmented health-care delivery and financing systems for these MENA countries. A number of these countries currently have to deal with rising health-care costs and inadequate financial protection at the consumer level. New calls for

universal health care coverage issued by global multilateral agencies, like the World Health Organization, are intensifying pressure on these governments to extend meaningful financial risk protection to all citizens.

With significant oil revenues, the upper-income countries have been able to achieve comprehensive health coverage for their populations, either free of charge or at highly subsidized rates. Evidence suggests however that this universal access, although generally affordable, could benefit from improved efficiency and quality reforms. Although per capita health expenditures are higher among these countries (ranging in 2010 from US \$568 in Oman to US \$1489 in Qatar), more recently the GCC governments have had to implement cost-containment measures and have begun to consider new financing strategies, including introduction of national health insurance schemes. They also face the challenge of providing health service coverage to foreign workers and their dependants.

Traditional Medicine Systems

The system of traditional medicine (TM) in MENA has a long history and is still available and used. The WHO terminology of TM is used here and is a comprehensive terminology that includes both TM systems as well as other forms of indigenous medicine. TM in MENA is largely based on an ancient system that is an amalgamation of the TM systems of China, Egypt,

Table 3 Key health expenditures and health resource data for MENA countries

Country/region	Health expenditure				Physicians per 1000 people ^b Latest available data from 2010 to 2013	Hospital beds per 1000 people ^b Latest available data from 2010 to 2013	
	Total (% of GDP) 1990 ^b	2010	Public 2010 (except where indicated) % of total	Out of pocket as % of private expenditure 2010			Per capita total at average exchange rate US\$ 2010
Algeria	3.0	4.3	79.9	94.7	198	1.2	–
Bahrain	–	4.3	71.1	60.9	748	1.5	2.1
Djibouti	–	7.9	68.5	99.1	99	0.2	1.4
Egypt	1.8	4.7	39.2	99.7	125	2.8	0.5
Iran	4.2 ^b	5.3	40.2	97	302	0.9	0.1
Iraq	–	8.5	81.2	100	247	0.6	1.3
Jordan	3.6	8.3	67.6	76.5	370	2.6	1.8
Kuwait	4.0	2.6	80.4	90.6	1225	1.8	2.2
Lebanon	5.3 ^b	6.2	27.0	75.7	574	3.5	3.5
Libya	–	3.0	70	100	389	1.9	3.7
Morocco	0.9	5.4	29.8	88.3	153	0.6	0.9
Oman	2.0	2.7	81.1	61.4	568	2.0	1.7
Qatar	2.8 ^b	2.1	77.5	71	1489	2.8	1.2
Saudi Arabia	–	4.0	66	57.3	659	0.9	2.1
Syria	0.4	3.4	46	100	97	1.5	1.5
Tunisia	3.0	5.7	54.3	87.8	241	1.2	2.1
UAE	0.8	3.7	73	63.2	1467	1.9	1.1
WBG	8.4 ^b	–	–	–	–	0.8	–
Yemen	1.1	5.6	21	98.6	80	0.2	0.7
MENA regional average	5.4 ^b (1994)	–	–	–	–	1.5	1.6
	1.8	–					

^aData for 2001 (public expenditure per capita).

^bWorld Bank estimates.

Reproduced from UNDP, 2005. Arab human development report 2004: Toward freedom in the Arab world. United Nations Development Program, New York; UNFPA and Population Reference Bureau, 2005. Country profiles for population and reproductive health: Policy development and indicators. Chapter 3: Arab States. http://www.prb.org/pdf06/2005UNFPA_CountryProfiles.pdf (accessed September 2007); and World Health Organization, 2013. World Health Statistics 2013, http://www.who.int/gho/publications/world_health_statistics/2013/en/ (accessed August 2014).

India, Iraq, Persia, and Syria and is referred to as *Unani*, or Arab medicine. *Unani*, according to WHO, is increasingly being used in the region despite the more readily available biomedical system. TM can generally be administered as medications or nonmedications, with the former mainly including herbal medicines and the latter comprising various techniques which can be performed with or without medications.

Traditional birth attendants (TBA) are also an important part of the TM system in the region. They are patronized mainly by populations in remote and rural areas of most MENA countries where, in addition to the age-old cultural practice of TBA, there are also significant physical barriers to accessing biomedical services. Surveys carried out by *Khattab et al. (2000)* in Saudi Arabia indicate that significant numbers of women in remote areas continue to patronize TBAs despite increasingly available hospital services. This suggests their continued importance in the provision of maternal and child health services in the country.

In an environment in which the licensing of TM practitioners is generally absent or not well monitored, it is difficult to quantify clients that patronize TM practitioners. In many MENA countries, practitioners provide services that are not regulated and that are mostly patronized by the poor due to easier physical and financial access. While TM is generally accessible and affordable in many MENA countries, it is often insufficiently integrated into national health systems.

WHO/EMRO has previously implemented a regional TM strategy (2002–05), with the following four key objectives:

1. To integrate relevant TM with national health-care systems by developing and implementing national TM policies;
2. To promote safety, efficacy, and quality by expanding the TM safety, efficacy, and quality knowledge base, and by providing guidance on regulatory and quality standards;
3. To increase the availability and affordability of TM; and
4. To promote the rational use of TM by providers and consumers.

The WHO released a new strategy for 2014–23 to address challenges that member countries continue to face. It calls for each member country to build their activities in developing effective policies and regulations around these three strategic sectors:

1. Build the knowledge base on traditional & complimentary medicine (T&CM) so that it can be managed actively through national policies.
2. Strengthen the quality assurance, safety, proper use, and effectiveness of T&CM by regulation and education of products, practices, and practitioners.
3. Promote universal health coverage by integrating T&CM services into health services by capitalizing on their potential to improve health and by ensuring that users are able to make informed choices about their health care.

Human Resources Issues in MENA Health Systems

The human resource situation in the region varies among and within countries in terms of quality, quantity, and distribution. MENA health systems also face the same global challenges of training, sustaining, and retaining health personnel. **Table 3** includes the number of physicians per 1000 population in

2000–03 and in 2010–13. The average for the region in 2000–03 was 1.2 physicians per 1000 population, which is lower than would be expected for a region largely composed of middle- and high-income countries. Yemen, Morocco, WBG, Iran, and Iraq have the lowest number of physicians, while Lebanon, Jordan, and UAE have the highest number per 1000 population. The quantity of other allied medical staff follows the same general trend as for physicians. The national and expatriate populations in MENA countries are increasing rapidly, and the demand on the physical health system infrastructure needed for effective acute care is being pushed to the limits, demonstrated by the overall decrease in hospital beds per 1000 people.

Similar to international trends, most health staff in the region are concentrated in urban areas. Rural areas often lack adequate staffing, not only in terms of numbers but also in terms of the required experience of available staff. There is also a shortage of female staff, which presents a major access problem as female health care workers are culturally required to attend to female patients.

There are insufficient numbers of public health practitioners to address the ongoing epidemiological transitions in the region. *Rawaf (2004)* notes that public health practitioners – especially physicians – have a low status and low incomes; this factor, along with underdeveloped public health capabilities and infrastructure, lack of structured training and career development opportunities, and lack of data, presents a significant challenge for the region. Appropriate policies and management of human resource issues are essential for integrating preventative and health promotion services with curative services and should also be factored into strengthening the curricula of training institutions in the region.

Pharmaceuticals and Medical Equipment and Technology

According to WHO/EMRO less than half of MENA countries have adopted or are actively implementing national drug policies, and yet less than a third of the population has regular access to essential drugs. In the absence of functional pharmaceutical regulations, irrational drug prescribing and self-medication are still major challenges in the region, despite the availability of essential drug lists and an abundance of treatment guidelines. The availability of prescription medications in private pharmacies makes self-medication relatively easy. The use of brand name medications instead of generics is also relatively common, and this together with irrational prescription habits contributes to a high proportion of total health expenditure on pharmaceuticals in the region. Developing more effective and better-regulated national procurement arrangements can also reduce pharmaceutical spending in countries. Given the curative care focus described earlier, spending on medical equipment and technology in MENA is also significant and inefficient.

Challenges to MENA Health Systems

Health Transition-Related Challenges

MENA health systems are under increasing pressure to keep pace with epidemiological and demographic transitions. The growing population implies that the cost of providing health

services will continue to increase because more people (refugees and foreign workers included) will require basic services, more women will require reproductive health services, more young people will require youth-friendly services, and the aging population will require more specialized care. MENA health systems have to adapt to address all these transitions within an environment of limited resources. New approaches and paradigms are needed in the reorganization of the health-care delivery system, which should feature better partnerships by different stakeholders and providers; redistribution of skills mix and enhancing the knowledge of health professionals; better use of primary and acute care services; and the rationalization of existing pharmaceuticals and medical technologies and the appropriate introduction of new ones.

With the current curative model of care focusing largely on acute care, MENA health systems could greatly benefit from a more strengthened primary health-care approach that not only provides regular and extended care to patients, but integrates preventive and health promotion services together with curative services. Patients and their households have a central role to play in the management of chronic conditions since they require daily lifestyle and behavior changes. Health systems must be involved in empowering patients to play a more active role in own their care and to link patients to community services that can support their efforts.

The emergence of new diseases such as HIV/AIDS and MERS-CoV has underscored the need for more effective surveillance systems as an important part of an overarching national monitoring and evaluation system needed to track not only these emerging infections but other existing conditions. A review of disease surveillance systems by WHO/EMRO notes that there is insufficient commitment to the systems, lack of practical guidelines, overwhelming reporting requirements, weak involvement of the private sector, lack of transparency, shortage of human resources, and poor data analysis. In the absence of efficient surveillance systems, it becomes difficult to effectively plan and implement measures that proactively curb the widespread transmission or the onset of diseases and to provide timely services for those who need them.

Health Systems-Related Challenges

Along with the need to adapt MENA systems to address health and demographic transition challenges is the need to concurrently address challenges related to the WHO's health systems strengthening building blocks: service delivery, health workforce, information, medical technologies, financing, and leadership (WHO HSS, 2006). To address these challenges, political commitment, resources, and management capacity are needed to strengthen existing public health functions or develop them where they are absent. The most critical of these functions include intersectoral policy making, public information and education, and quality assurance and improvement. The management of these functions can only succeed where transparent governance structures exist and where more complex coordination among the different entities beyond the health sector can take place.

Addressing prevailing service delivery concerns will require a shift from the current curative care model together with

more comprehensive rationalization of health resources. In general, there are more hospital beds than needed in most countries of the region and particularly in the public sector, which has a regional average of 80% of the beds but less than 65% occupancy rates. Maintaining this excess capacity has resource implications. Instead of the current focus on expanding the hospital-based infrastructure, more critical is the need to reconfigure the MENA health system to better integrate the provision of preventative and promotional services with treatment and support services. With the growing population, MENA health systems require a stronger emphasis on services and functions aimed at reducing the population's level of exposure to existing risks of emerging challenges, rather than the more expensive option of treating them when affected. In addition, a surveillance and treatment infrastructure designed to swiftly address modern health care threats from epidemics of MERS Co-V and other dangerous pathogens needs to be developed in the near term.

The health care workforce of the MENA region is very diverse, with staff hailing from virtually every corner of the world in great numbers. This diversity is both an incredible asset to the health sector of the region, as well as one of its greatest vulnerabilities. Recruitment and retention of the workforce is a key initial challenge. Professional licensing and ongoing continuous medical and nursing education and recertification for all professionals is another key challenge. Finally, a diverse health care workforce needs strong organizational culture with clear and easily understood standards and policies, values-based leadership, and a sense of accountability for performance.

Data collection, management, and reporting are increasingly a part of any modern health care delivery system. This is true in the MENA region as it is elsewhere in the world. Addressing systemic challenges will require more comprehensive health information systems that provide relevant data that are readily available for assessing priorities as well as for planning, managing, and implementing the required services. Unfortunately, the region generally lacks available, reliable, timely data to guide these processes. Many countries and large systems are investing substantively in electronic data capture and reporting systems; some are investing in electronic health records at the service delivery level. These systems afford the opportunity to produce data about system and clinical performance that could aid MENA health system managers to make more rational and evidence-informed decisions about how to improve the health system in the future.

Availability of critical technologies, medical products, vaccines, and other technologies is increasingly challenging in a geopolitical region that is riddled with conflict, war, and geographic adversity, with rural populations that are spread across an enormous geographic territory. In addition to these challenges, rational procurement and importation issues will present MENA countries with challenges in the near term.

Improving and sustaining achievements of national health systems in the region becomes even more challenging within the context of a growing population, especially one with a high economic dependency rate. With 58% of the population less than 25 years of age and the highest unemployment rate,

the proportion of the MENA population that is economically active is the lowest in the world. This has implications for how health insurance schemes in the region (social and private) can be more efficiently managed and maintained. The high dependency ratio adds more fiscal pressure on limited government health budgets, which need to be better targeted at addressing the needs of the most vulnerable populations. Governments can also take better advantage of the growing private health sector by fully regulating them and ensuring that private along with public investments are made in more cost-effective technologies.

Financing considerations will require extending financial protection to those who most need it. With the exception of a few countries (Saudi Arabia, Oman, and UAE), out-of-pocket expenditures accounted for at least 74% of private health expenditures in 2003 (see [Table 2](#)), which disproportionately affects the poorer populations, who can be further impoverished in the event of a catastrophic illness. MENA governments are increasingly interested in extending financial protection and improving access to health services by using different risk-pooling mechanisms, including social and private health insurance, and could benefit from global experiences in achieving these. Well-targeted social safety nets are needed to ensure adequate protection of citizens against the impoverishing effects of ill health.

Finally, leadership systems of many MENA health care systems have undergone substantial turnover with changes to governments in the region. Where leadership and governance have been relatively stable, leaders are often challenged by limited support beyond the top-most level of leadership, inadequate ongoing leadership skill development, incomplete information for management, and many competing priorities expressed by varied stakeholders in the system (patients, providers, and policy-makers, to name a few). These are not unique situations to leading health systems anywhere in the world, but combined with some of the other challenges noted above, MENA health care system leaders are particularly challenged to deliver on the promise of providing high quality, effective, efficient, and equitable health care services to the populations of the MENA region.

Conclusion

The region clearly faces a multitude of challenges at various levels and scope, with some easier to address than others. Governments have the complicated task of defining the priorities and determining the best options for addressing them within budget-constrained environments. To effectively and efficiently respond to these challenges, MENA governments must also have the political will to involve key stakeholders in the planning, implementation, and management of health systems.

The MENA region is not alone in trying to keep pace with the current and future health-related transitions; all other regions have their own similar and yet unique sets of challenges. The beauty of globalization is that regions and countries can benefit from others and share their experiences and ideas in tackling these challenges together.

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See also: Centers for Disease Control; Nongovernmental Organizations (NGOs); Southeastern Europe, Health Systems of.

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Relevant Website

- <http://www.hsph.harvard.edu/organizations/bdu/GBDseries.html> – Burden of Disease Unit, Center for Population and Development Studies at the Harvard School of Public Health.